

FIELD CHANGE REQUEST (FCR) FORM

Project Name: Arkema Project Area – PDI Phase 2
Client: LSS/Retia USA

Project No.: CF16Z
Request No.: FCR-17

To: Madi Novak, EPA Date: March 30, 2022

Field Change Request Title: Vibracore Step-Outs into the Navigation Channel.

Description:

Phase I sediment vibracoring was conducted at 39 stations in November/December 2021. All sediment samples collected in the Dock 1 and 2 Reach were analyzed for chlorobenzene (because of short VOC analysis hold times) to determine the vertical distribution of chlorobenzene in sediment. Other sediment samples are being analyzed sequentially using the sediment sample analysis decision tree as a guide (Figure 3-2c of the Arkema Project Area Pre-Design Investigation (PDI) work plan). Remediation thresholds were exceeded for chlorobenzene in sediment samples on the farthest most riverward row of sediment cores, at stations SC-52, SC-56, SC-60, SC-64, SC-67, and SC-70. Chlorobenzene remediation threshold exceedances were bracketed to the north and south at sediment cores SC-47 and SC-72, respectively. However, another row of sediment cores is needed to delineate the lateral extent of remediation threshold exceedances to the east of the above referenced core locations.

Recommended Change:

Another row of sediment vibracore stations is recommended toward the river channel. The additional stations are shown on Figures 1 and 2. The additional stations (SC-52-0, SC-56-0, SC-60-0, SC-64-0, SC-67-0, and SC-70-0) will be advanced and sampled to 19 ft bml or to sampler refusal using the protocol developed in the approved PDI work plan (Section 4.5.1 of the Field Sampling Plan (FSP), Appendix A to the PDI Work Plan) and related approved FCRs, as needed. Each 1-ft interval from these cores will be analyzed for chlorobenzene by EPA Method 8260C in accordance with the PDI Work Plan. Depending on the chlorobenzene results from these additional core locations, additional step-out cores may be completed in accordance with this FCR procedure with the goal to laterally and vertically delineate chlorobenzene concentrations in sediment in the Dock 1 and 2 Reach. If additional cores are recommended, the locations will be provided to EPA for approval with a reference to this FCR.

Field Operations Lead (or designee)


Signature

March 30, 2022
Date

Approval:

Eron Dodak
Project Manager


Signature

March 30, 2022
Date

Madi Novak
EPA Remedial Project Manager

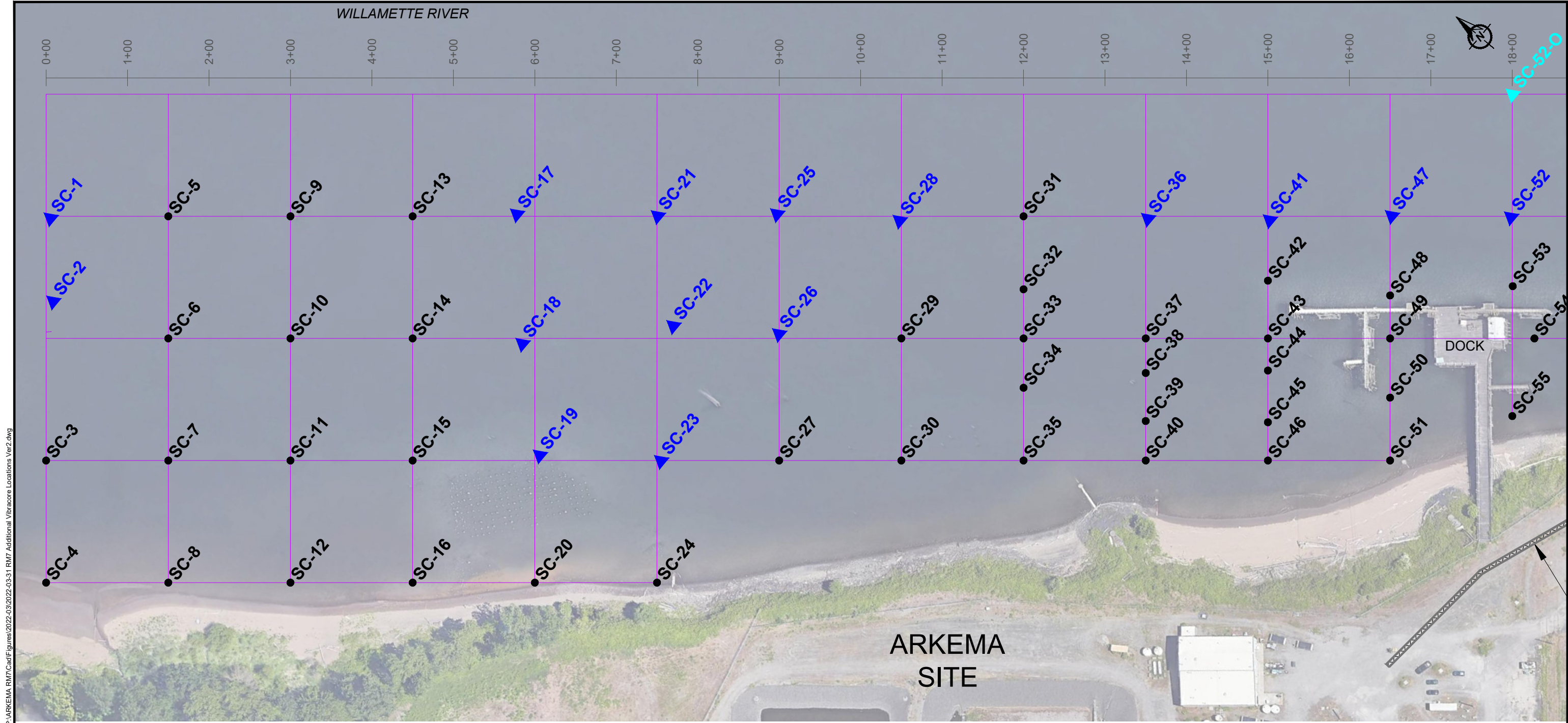
Signature

Date

Distribution:

LSS Project Coordinator
Integral Project Manager
Field Operations Lead
QA Officer





Project File
Other:

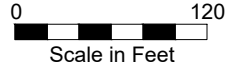



PLOT TIME: 3/31/2022 1:53 PM MOD TIME: 3/31/2022 1:53 PM USER: Lee Barras DWG: P:\ARKEMA RM7\Caol\Figures\2022-03\2022-03-31 RM7 Additional Vibracore Locations Ver2.dwg

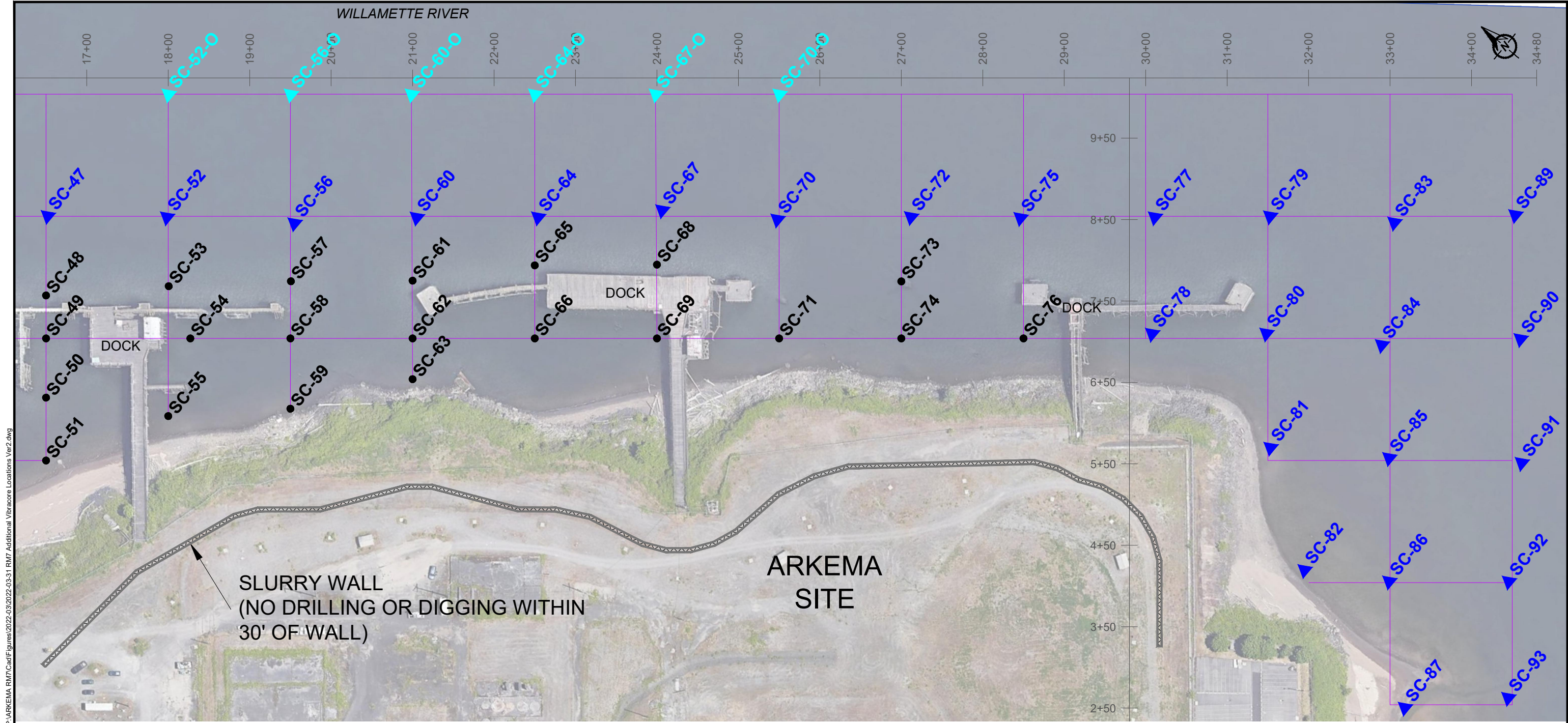
NOTES:

1. The horizontal coordinate system for the project is based on NAD83/2011 Oregon State Plane, North Zone, International Foot.
2. Background Image source: GoogleEarth 2021.

PDI Vibracore Sampling	
 SC-xx-O	Phase1 Vibracore - Proposed Additional Location
 SC-xx	Phase1 Vibracore - Completed
 SC-xx	Phase1 Vibracore - To be Completed
	Sampling Grid
	Slurry Wall



ARKEMA RM7 PORTLAND	
Arkema Project Area Pre-Design Investigation Work Plan	
Additional Sediment Sampling Downstream	
	
FIGURE 1	
March 30, 2022	

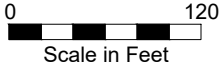


PLOT TIME: 3/31/2022 1:53 PM MOD TIME: 3/31/2022 1:53 PM USER: Lee Barras DWG: P:\ARKEMA RM7\Cad\Figures\2022-03\2022-03-31 RM7 Additional Vibracore Locations Ver2.dwg

NOTES:

1. The horizontal coordinate system for the project is based on NAD83/2011 Oregon State Plane, North Zone, International Foot.
2. Background Image source: GoogleEarth 2021.

- PDI Vibracore Sampling**
- ▲SC-xx-O Phase1 Vibracore - Proposed Additional Location
 - ▲SC-xx Phase1 Vibracore - Completed
 - SC-xx Phase1 Vibracore - To be Completed
 - Sampling Grid
 - ▨ Slurry Wall



ARKEMA RM7 PORTLAND		
Arkema Project Area Pre-Design Investigation Work Plan		
Additional Sediment Sampling Upstream		
		FIGURE 2
		March 31, 2022